

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
23 October 2003 (23.10.2003)

PCT

(10) International Publication Number
WO 2003/086300 A3

(51) International Patent Classification⁷: **A61K 39/395**,
38/00, 38/16

REBECK, William, G. [US/US]; 118 North Carolina
Avenue, SE, Washington, DC 20003 (US).

(21) International Application Number:
PCT/US2003/010938

(74) Agent: VAN AMSTERDAM, John, R.; Wolf, Greenfield
& Sacks, P.C., 600 Atlantic Avenue, Boston, MA 02210
(US).

(22) International Filing Date: 9 April 2003 (09.04.2003)

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG,
SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN,
YU, ZA, ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/371,191 9 April 2002 (09.04.2002) US

(71) Applicants (*for all designated States except US*): **THE
GENERAL HOSPITAL CORPORATION** [US/US]; 55
Fruit Street, Boston, MA 02214 (US). **AMERICAN RED
CROSS** [US/US]; Holland Laboratory, 15601 Crabbs
Branch Way, Rockville, MD 20855 (US).

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **HYMAN, Bradley**,
T. [US/US]; Department of Neurology/Alzheimer Unit,
114 16th Street, Charlestown, MA 02129 (US). **STRICK-
LAND, Dudley** [US/US]; Department Vascular Lab,
American Red Cross/Holland Lab, 15601 Crabbs Branch
Way, Rockville, MA 20855 (US). **KINOSHITA, Ayae**
[US/US]; Department of Neurology/Alzheimer Unit, 114
16th Street, Charlestown, MA 02129 (US). **WHELAN,
Christa** [US/US]; Department of Neurology/Alzheimer
Unit, 114 16th Street, Charlestown, MA 02129 (US).

Published:

— with international search report

(88) Date of publication of the international search report:
22 January 2004

*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: METHODS AND COMPOSITIONS FOR TREATING ALZHEIMER'S DISEASE

(57) Abstract: The present invention relates to the treatment, diagnosis, and prophylactic prevention of Alzheimer's disease. More specifically, the present invention relates to methods and compositions for preventing the endocytosis and cellular internalization of integral membrane amyloid precursor protein (APP) and its subsequent catabolism by blocking or interfering with the association or binding of APP with the very low density lipoprotein receptor.

WO 2003/086300 A3



LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *without international search report and to be republished upon receipt of that report*

(84) **Designated States (regional):** ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/10938

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61K 39/395, 38/00, 38/16
US CL : 424/130.1, 143.1, 152.1; 514/2, 8

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 424/130.1, 143.1, 152.1; 514/2, 8

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
none

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
CAS-ONLINE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,156,311 A (STRICKLAND et al.) 05 December 2000, see the entire document.	1-28

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&"

document member of the same patent family

Date of the actual completion of the international search

24 July 2003 (24.07.2003)

Date of mailing of the international search report

17 OCT 2003

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (703)305-3230

Authorized officer

Kevin E. Weddington
Kevin E. Weddington

Telephone No. (703) 308-1234